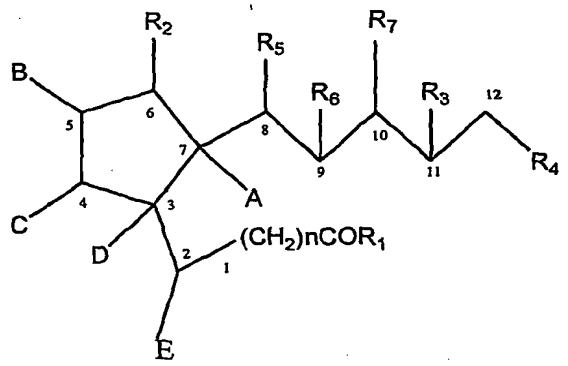
CLAIMS

We claim:

1. A compound of Formula I:



Formula I

wherein:

n is 0,1, or 2;

R_1 is OH, C_1 to C_{12} alkoxy, C_1 to C_{12} substituted alkoxy, aryloxy, O-glucosyl or imino;

R_2 is OH, C_1 to C_{12} alkoxy, C_1 to C_{12} substituted alkoxy, O-glucosyl, oxo, alkyl or imino;

R_3, R_4, R_5, R_6, R_7, A, B, C, D and E are each independently H, halogen, OH, C_1 to C_{12} alkoxy, C_1 to C_{12} substituted alkoxy, aryloxy, O-glucosyl, C_1 to C_{12} alkyl or C_1 to C_{12} substituted alkyl;

wherein R_1 and R_2, or R_1 and R_4 may form together a lactone which is optionally *substituted*;

wherein the bonds between C_3:C_7, C_4:C_5, and C_9:C_{10} may independently be double bonds or single bonds;

provided that at least one of R_3, R_4, R_5, R_6, R_7, A, B, C, D and E is a halogen; and provided that, if A is the only halogen in the compound, that A is not fluoro;

or a derivative of said formula, wherein the derivative has at least one of the following:

a lower acyl side chain at C_3 (free acid or ester or conjugate), a keto or hydroxy (free hydroxy or ester) moiety at the C_6 carbon, or an n-pentenyl or n-pentyl side chain at C_7;

including salts, hydrates, solvates, polymorphs, optical isomers, enantiomers, diastereomers, and mixtures thereof.

2. The compound of claim 1, wherein the bond between C_9 and C_{10} is a single bond.

3. The compound of claim 1, wherein R_2 is oxo.

4. The compound of claim 1, wherein at least one of R_6 and R_7 is selected from the bromo, iodo, fluoro and chloro.

5. The compound of claim 1, wherein both of R_6 and R_7 are selected from bromo, iodo, fluoro and chloro.

6. The compound of claim 1, wherein both of R_6 and R_7 are bromo.

7. The compound of claim 1, wherein A, B, R_6 and R_7 are bromo, iodo, fluoro and chloro.

8. The compound of claim 1, wherein A, B, R_6 and R_7 are each bromo.

9. The compound of claim 1, wherein R_1 is alkoxy.

10. The compound of claim 1, wherein R_3, R_4 and R_5 are each H.

11. The compound of claim 1, wherein C, D and E are each H.

12. The compound of claim 1, wherein: n is 0; the bonds between C_3:C_7, C_4:C_5, and C_9:C_{10} are single bonds; R_1 is methoxy; R_2 is oxo; R_3, R_4, R_5, A, B, C, D and E are each H; and R_6 and R_7 are each bromo.

13. The compound of claim 1, wherein: n is 0; the bonds between C_3:C_7, C_4:C_5, and C_9:C_{10} are single bonds; R_1 is methoxy; R_2 is O bound through a double bond to the carbon in position 6 thereby forming a carbonyl group; R_3, R_4, R_5, C, D and E are each H; and A, B, R_6 and R_7 are each bromo.

14. A pharmaceutical composition comprising a pharmaceutically acceptable carrier, and as an active ingredient a compound of claim 1.

15. A pharmaceutical composition comprising a pharmaceutically acceptable carrier, and as an active ingredient a compound of claim 12.

16. A pharmaceutical composition comprising a pharmaceutically acceptable carrier, and as an active ingredient a compound of claim 13.

17. The pharmaceutical composition of claim 14, wherein the active ingredient is dissolved in a pharmaceutically acceptable lipid carrier.

18. A method for reduction of the growth of cancer cells, comprising exposing the cancer cells to a therapeutically effective amount of a compound of claim 1.

19. The method of claim 18 wherein the cancer is a mammalian cancer.

20. The method of claim 19 wherein the mammal is a human.

21. The method of claim 18, wherein the compound is of claim 4.

22. The method of claim 18, wherein the compound is of claim 12.

23. The method of claim 18, wherein the compound is of claim 13.

24. The method of claim 18, wherein the cancer is selected from the group consisting of carcinoma, sarcoma, adenoma, hepatocellular carcinoma, hepatoblastoma, rhabdomyosarcoma, esophageal carcinoma, thyroid carcinoma, ganglioblastoma, fibrosarcoma, myxosarcoma, liposarcoma, chondrosarcoma, osteogenic sarcoma, chordoma, angiosarcoma, endotheliosarcoma, lymphagiosarcoma, synovioama, Ewing's tumor, leimyosarcoma, rhabdotheliosarcoma, colon carcinoma, pancreatic cancer, breast cancer, ovarian cancer, prostate cancer, squamous cell carcinoma, basal cell carcinoma, adenocarcinoma, renal cell carcinoma, hematoma, bile duct carcinoma, melanoma, choriocarcinoma, seminoma, embryonal carcinoma, Wilms' tumor, cervical cancer, testicular tumor, lung carcinoma, small cell and non-small cell lung carcinoma,

bladder carcinoma, epithelial carcinoma, glioma, astrocyoma, medulloblastoma, craniopharyngioma, ependynoma, pinealoma, retinoblastoma, rectal carcinoma, cancer of the thyroid, head and neck cancer, brain cancer, cancer of the peripheral nervous system, cancer of the central nervous system, neuroblastoma, cancer of the endometrium, lymphoproliferative diseases, hematopoietic malignancies including all types of leukemia and lymphoma including: acute myelogenous leukemia, acute myelocytic leukemia, acute lymphocytic leukemia, chronic myelogenous leukemia, chronic lymphocytic leukemia, mast cell leukemia, multiple myeloma, myeloid lymphoma, Hodgkin's lymphoma, non-Hodgkin's lymphoma.

25. The method of claim 18, wherein the cancer is selected from the group consisting of prostate cancer, breast cancer, skin cancer, colon cancer, lung cancer, pancreatic cancer, lymphoma, leukemia, head and neck cancer, kidney cancer, ovarian cancer, bone cancer, liver cancer and thyroid cancer.

26. The method of claim 18, wherein the cancer is selected from the group consisting of leukemia, lung carcinoma, melanoma and colon cancer.

27. A method for the treatment of cancer comprising administering to the subject in need thereof a pharmaceutical composition containing as an active ingredient a therapeutically effective amount of the compound according to any one of claims 1-13.

28. Use of a compound according to any one of claims 1-13 for the manufacture of a medicament for the treatment of cancer.

29. Use according to claim 28, wherein the cancer is selected from the group consisting of carcinoma, sarcoma, adenoma, hepatocellular carcinoma, hepatoblastoma, rhabdomyosarcoma, esophageal carcinoma, thyroid carcinoma, ganglioblastoma,

fibrosarcoma, myxosarcoma, liposarcoma, chondrosarcoma, osteogenic sarcoma, chordoma, angiosarcoma, endotheliosarcoma, lymphagiosarcoma, synovioama, Ewing's tumor, leimyosarcoma, rhabdotheliosarcoma, colon carcinoma, pancreatic cancer, breast cancer, ovarian cancer, prostate cancer, squamous cell carcinoma, basal cell carcinoma, adenocarcinoma, renal cell carcinoma, hematoma, bile duct carcinoma, melanoma, choriocarcinoma, seminoma, embryonal carcinoma, Wilms' tumor, cervical cancer, testicular tumor, lung carcinoma, small cell and non-small cell lung carcinoma, bladder carcinoma, epithelial carcinoma, glioma, astrocyoma, medulloblastoma, craniopharyngioma, ependynoma, pinealoma, retinoblastoma, rectal carcinoma, cancer of the thyroid, head and neck cancer, brain cancer, cancer of the peripheral nervous system, cancer of the central nervous system, neuroblastoma, cancer of the endometrium, lymphoproliferative diseases, hematopoietic malignancies including all types of leukemia and lymphoma including: acute myelogenous leukemia, acute myelocytic leukemia, acute lymphocytic leukemia, chronic myelogenous leukemia, chronic lymphocytic leukemia, mast cell leukemia, multiple myeloma, myeloid lymphoma, Hodgkin's lymphoma, non-Hodgkin's lymphoma, as well as metastasis of all the above.

30. Use according to claim 28, wherein the cancer is selected from the group consisting of prostate cancer, breast cancer, skin cancer, colon cancer, lung cancer, pancreatic cancer, lymphoma, leukemia, head and neck cancer, kidney cancer, ovarian cancer, bone cancer, liver cancer and thyroid cancer.

31. Use according to claim 28, wherein the cancer is selected from the group consisting of leukemia, lung carcinoma, melanoma and colon cancer.